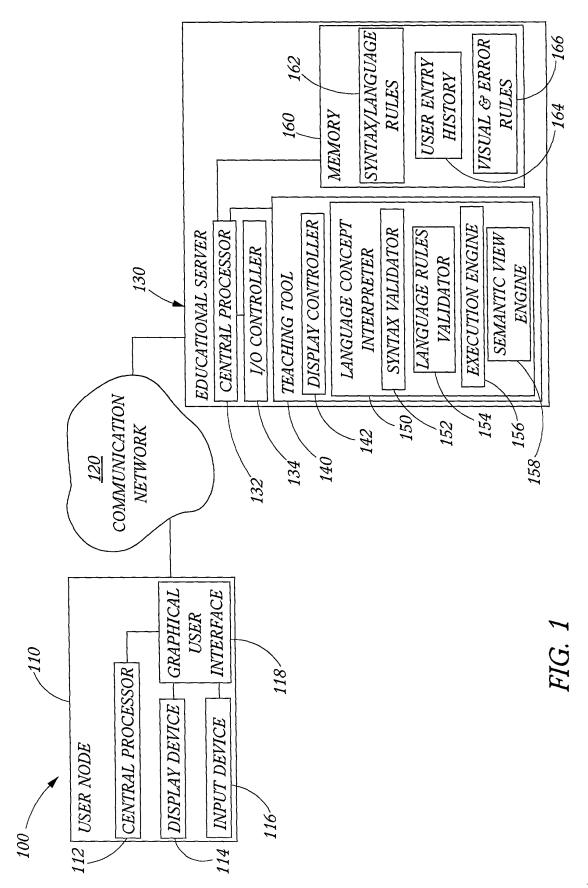
EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213



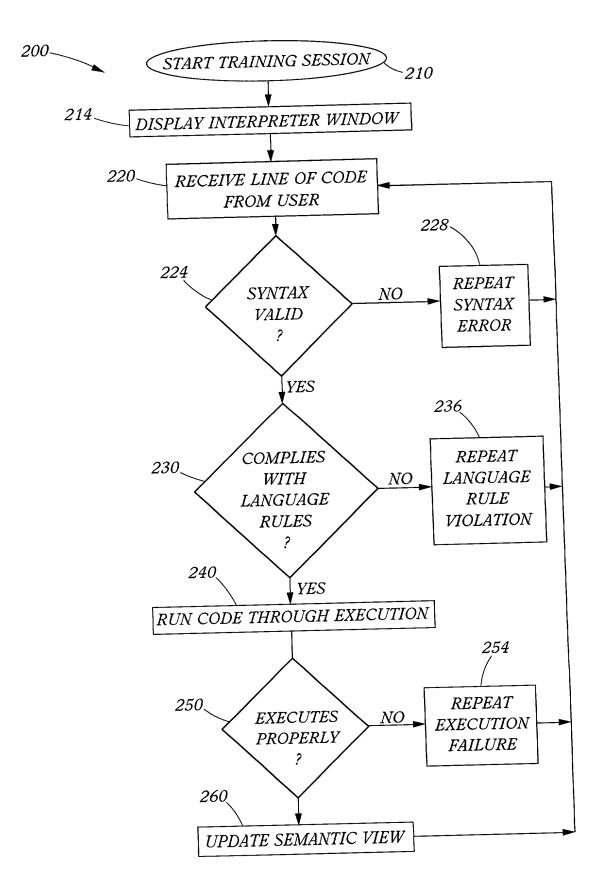


FIG. 2

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

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ii.										3
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int	x=25;									3
		(DE		LOC	CAL VAF ME	RIABLES	3	17411		
10	<u> 1 Y</u>	PE_		<u>NA</u>	IVIE	<u> </u>		VALU	<u>'</u>	
 										
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FIG. 3

300								
		OBJECT TO	OL INT	ERPRETER		D 318		
OPTIONS	VIEW	FONT				/		
IMPORT :						304		
CODE ENTRY HISTORY								
int x=25;	.310					i i		
						W .		
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						{ }		
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						306		
 	CODE ENTRY							
						314		
TV	'DE	LOC/	AL VAR	IABLES	\/A111E			
int	PE	X NAM		25	VALUE			
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FIG. 4

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

300 **OBJECT TOOL INTERPRETER** 318 OPTIONS VIEW FONT IMPORT: 304 **CODE ENTRY HISTORY** int x = 25; _310 x = x + 25: 320 int y = x / 4; 326int z = x % y; 330byte b = x; 336 Error assignment failure Cannot assign java lang integer to java_338 lang Byte $b = (byte) x; __340$ short s = (short) y; 344boolean b2 = x > y, 350 double d = x / y, 356 306 CODE ENTRY 314 LOCAL VARIABLES TYPE VALUE NAME 50 int χ 322 12 int 328 2 int 332 b 50 byte 342 12 short s 346 boolean b2 true *352*[°] ď 4.0 double 358

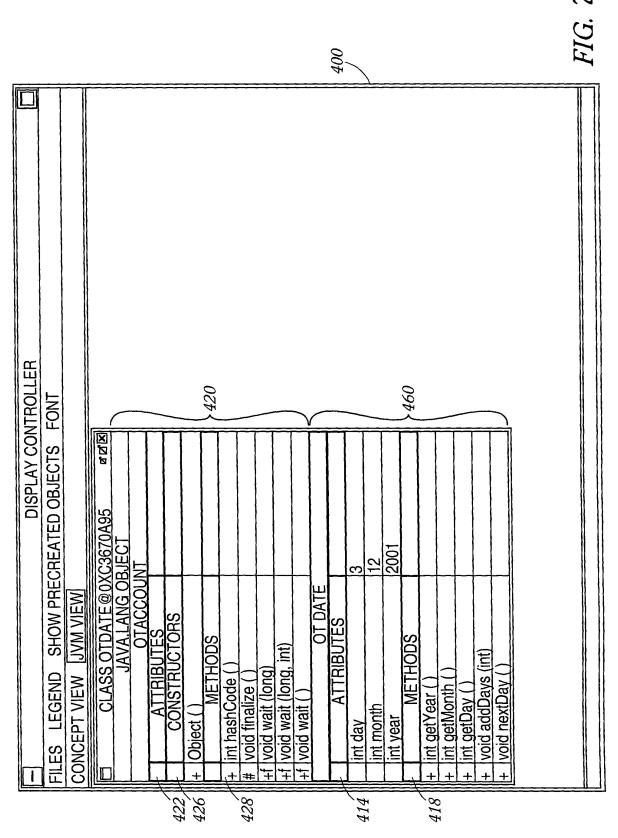
FIG. 5

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K, PERUMAINAR P7213

300 **OBJECT TOOL INTERPRETER** 318 OPTIONS VIEW FONT IMPORT : 304 **CODE ENTRY HISTORY** int x = 25; 310 x = x + 25; 320 int y = x/4; 326 int z = x % y; _330 byte $b = x; _336$ Error assignment failure Cannot assign java lang integer to java __338 lang Byte $b = (byte) x; __340$ short s = (short) y; 344boolean b2 = x > y; 350 double d = x / y; 356 double x = 2.0; __360 Error duplicate variable declaration x: 362 306 **CODE ENTRY** 314 LOCAL VARIABLES **TYPE** NAME VALUE 0000000000000000000000000110010 X 322 0000000000000000000000000001100 int ٧ 328 int z 332 byte b 00110010 364 342 short 0000000000001100 S 346 boolean b2 true *352* [°] double d 4.0 358

FIG. 6

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

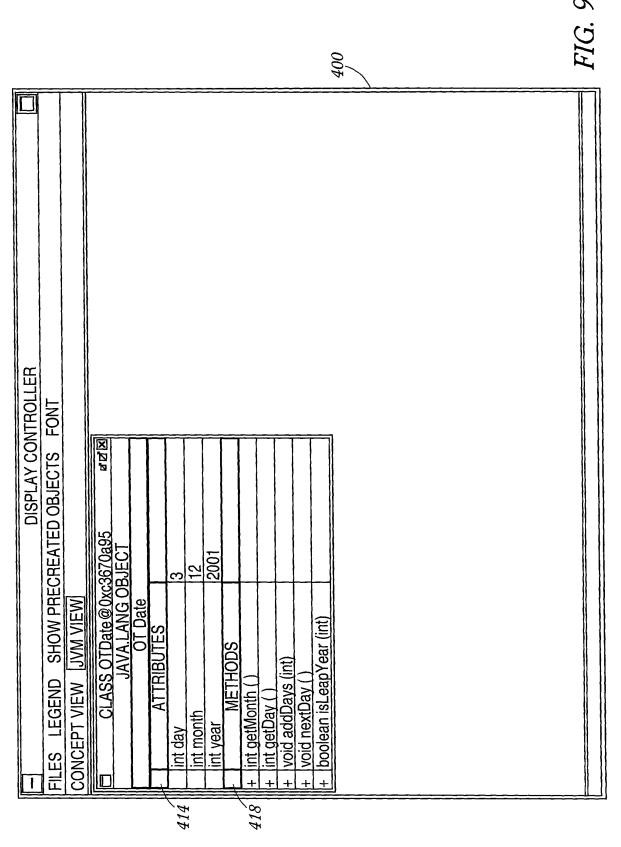


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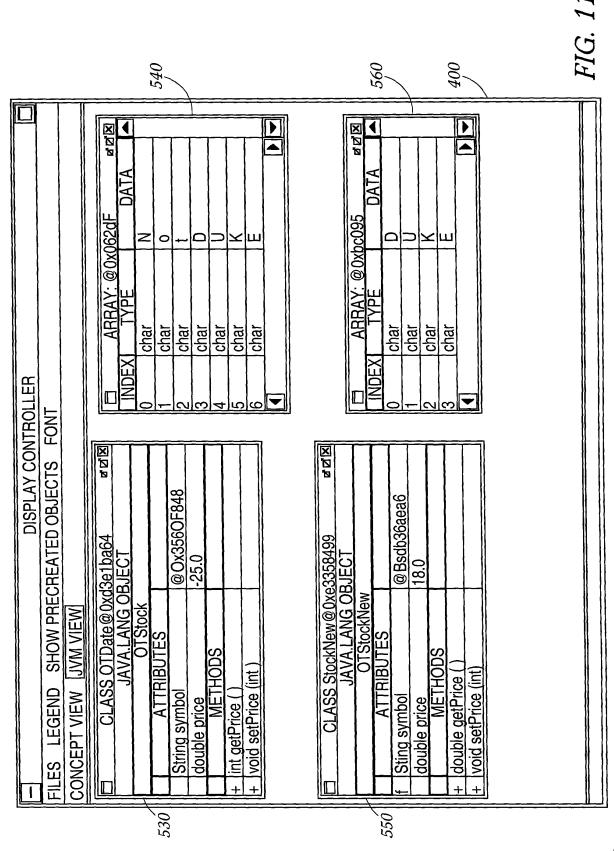
	OBJECT TO	OL INTERPRETER				
OPTIONS VIEW	FONT		1			
IMPORT :			\mathbb{H}			
IVII OTTI	CODE EN	NTRY HISTORY	∜			
int x = 25;310			1			
x = x + 25; 320			I			
int $y = x / 4$; 326			-			
int $z = x \% y$; _33						
byte b = x; 336	· ·		-			
	Error assignment failure Cannot assign java lang integer to java338					
lang Byte		3, 3 3, -	∦			
b = (byte) x;340			I			
short $s = (short) y$;	_344					
boolean b2 = $x > y$						
double $d = x / y$;			-			
double x = 2.0; _3	double x = 2.0;360 Error duplicate variable declaration x;362					
OTDate date1 = ne		.412				
nt today = date1 day; 432 date1 day = 31; 436						
poolean leapYear = date1.isLeapYear(2001);438						
	·	DDE ENTRY	4			
		JUE ENTRY	-{			
	LOCAL VARIABLES					
TYPE	NAME_	VALUE	7			
int	Х	50				
int	lv	12				
1000			┙			
int	Z	2	_			
int byte	b	50	-			
int byte short	b s	50 12	7 7 7			
int byte short boolean	b s b2	50 12 true				
int byte short boolean double	b s b2 d	50 12 true 4.0				
int byte short boolean double OTDate	b s b2 d date1	50 12 true 4.0 @0xc3670a95				
int byte short boolean double	b s b2 d	50 12 true 4.0				

FIG. 8



r	300								
	<u>-</u>		. INTERPRETER	318					
Ì	OPTIONS VIEW F	FONT		304					
	IMPORT :								
	CODE ENTRY HISTORY								
	OTStock stock1 = new OTStock("DUKE", 18.0);502 stock1.symbol = "NotDUKE";504								
	stock1.symbol = NotBolk2								
Ì			New("DUKE", 18.0);_508	}					
	stock2.symbol = "NC Error cannot write to) I DUKE2";5.	10 512)					
}	stock2.price = -25.0;		_512						
	Error cannot write to	a private attribut	e; <i>516</i>	I					
	String theSymbol = s	stock2.symbol;	.518	il .					
	CODE ENTRY								
	LOCAL VARIABLES								
	TYPE	NAME	VALUE						
520	OTStock	stock1	@0xd3e1ba64						
524	OTStockNew String	stock2 theSymbol	@0x3368499 "DUKE"						
<i>528</i>	String	titeoyinbor	DONE						
				 					
									

FIG. 10



EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

	OBJECT TOO	L INTERPRETER	
OPTIONS VIEW F			
IMPORT :			
	CODE EN	TRY HISTORY	
OTAccount acct = ne acct.deposit(300); acct.withdraw(350); OTSavingsAccount s sa.deposit(300); 5 sa.withdraw(350);	572 _574 a = new OTSav 78	ingsAccount("jo");_576	
	COI	DE ENTRY	
	LOCA	L VARIABLES	
TYPE	LOCA NAME	L VARIABLES VALUE	
OTAccount OTSavingsAccount	LOCA	L VARIABLES	
OTAccount	LOCA NAME acct	L VARIABLES VALUE @0x24a360da	
OTAccount OTSavingsAccount	LOCA NAME acct	L VARIABLES VALUE @0x24a360da	
OTAccount OTSavingsAccount	LOCA NAME acct	L VARIABLES VALUE @0x24a360da	
OTAccount OTSavingsAccount	LOCA NAME acct	L VARIABLES VALUE @0x24a360da	
OTAccount OTSavingsAccount	LOCA NAME acct	L VARIABLES VALUE @0x24a360da	

FIG. 12

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

019 620 B Z X @0x836015Fb CLASS OTSavingsAccount@0x744dbe1 100.0 300.0 **OTSavingsAccount** JAVA.LANG OBJEC OTAccount void setIntRate (double) 'RIBUTES void withdraw (double) void withdraw (double) void setName (String) void deposit (double) METHODS #\$ double minBalance double getIntRate (double balance (double amount double intRate Sting to String Sting to String String name DISPLAY CONTROLLER FONT SHOW PRECREATED OBJECTS X D D @0x75c13a91 100.0 CLASS OTAccount@0x24a360da -51.0 JAVA.LANG OBJECT JVM VIEW void withdraw (double) void setName (String) void deposit (double) METHODS #\$|double minBalance ATTRIBU double balance (FILES LEGEND double amount String to String CONCEPT VIEW String name 604

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

	300								
Ţ.	-1 (OBJECT TOOL I	NTERPRETER						
	OPTIONS VIEW FO	NT							
	IMPORT :		V LICTORY	304					
	CODE ENTRY HISTORY								
	OTAccount bank[] = r bank[0] = new OTAcco bank[1] = new OTSavir	new OTAccount[8 ount("Fred):632	3];630 2						
	bank[1]= new OTSavir	ngsAccount("jo");	_634						
	bank[0] deposit(300); bank[0] withdraw(350)	_636							
	hank[1] denosit(300):	.640							
	bank[1] withdraw(350)	<u>642</u>							
				300	_				
				306)				
		CODE ENTRY							
	LOCAL VARIABLES								
	TYPE	NAME	VALUE @0x3d337a4a						
644	OTAccount	bank	@0x30337a4a						
0									

FIG. 14

4

EDUCATIONAL METHOD AND TOOL FOR ISOLATING AND TEACHING PROGRAMMING LANGUAGE CONCEPTS ASOK K. PERUMAINAR P7213

